G-TEDS
1984

AUTHOR
Universal Measured Service

TITLE
System

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BASIC PRODUCT DESCRIPTION
(WITH ISSUE IDENTIFICATION)
GTEDS
UNIVERSAL MEASURED SERVICE
SYSTEM

- THUMBNAIL: A SOFTWARE PACKAGED DESIGNED TO COLLECT, EDIT AND REDUCE CUSTOMER CALL RECORDS IN PREPARATION FOR BILL PROCESSING.

  - MAY BE APPLIED FOR EITHER LOCAL OR TOLL CALL WITH PRIMARY USE FOR CAPTURING DURATION, DISTANCE AND TIME OF DAY FOR LOCAL CALLS.

  - A FUNCTIONING SYSTEM HAS THE FOLLOWING MAIN COMPONENTS:

    1. SWITCH INTERFACE DEVICE TO COLLECT CALL ACTIVITY AT SWITCH.

    2. UNINTERRUPTIBLE MINICOMPUTER TO ACQUIRE AND STORE DATA FROM ONE OR MORE SWITCHES.

    3. SOFTWARE TO ORGANIZE, EDIT AND REDUCE CALL DATA IN PREPARATION FOR MAINFRAME PROCESSING.

    4. ASSOCIATED COMMUNICATIONS LINKS BETWEEN SWITCHES, MINI AND MAINFRAME.

ENVIRONMENTAL FACTORS

PRIMARY ENVIRONMENTAL FACTOR IS TREND TOWARDS LOCAL MEASURED SERVICE. LMS PROPELLED BY DEREGULATORY-INSPIRED VIEW THAT "COST CAUSER SHOULD BE COST PAYER".

- MANY PUC'S LOOK POSITIVELY ON USAGE SENSITIVE PRICING. 75% OF JURISDICTIONS HAVE SOME FORM OF USAGE SENSITIVE PRICING.

- IN OVER HALF THESE CASES IMPETUS FOR USP CAME FROM COMMISSION.

- IN 1982 ONLY 5 JURISDICTIONS HAD USP WITH DISTANCE, LENGTH AND TIME OF DAY RATE PLANS FOR LOCAL SERVICE; LESS THAN 10% OF JURISDICTIONS.

- BY RELATING REVENUE TO LOCAL USAGE, THERE IS LESS FREQUENT NEED FOR "RATE INCREASES," A POLITICAL POSITIVE FOR PUC'S.

- REVENUE RELATED TO USAGE IS ALSO A POSITIVE FOR TELCOS, RESULTING IN REDUCED REGULATORY INTERACTION AND SIMPLIFIED RATE CASES.

ENVIRONMENTAL FACTORS - (cont'd)

- OTHER EXTERNAL FACTORS (SUCH AS THE NEED TO TRACK TERMINATING CALLS) DISTURBS CONVENTIONAL BILLING SYSTEMS AND MAY INCREASE TELCO READINESS TO CHANGE.

- UMS SYSTEM IS CONSISTENT WITH CONTINUING TREND TO SUBSTITUTE AUTOMATION FOR LABOR AND THE GENERAL PROLIFERATION OF COMPUTERS WITHIN TELCOS.

- UMS IS CONSONANT WITH THE PERSISTENT MOVE TOWARD STORED PROGRAM CONTROL (SPC) ELECTRONIC SWITCHES BUT IS ALSO COMPATIBLE (FUNCTIONALLY) WITH EM SWITCHES.

- THERE ARE SEVERAL ENVIRONMENTAL "WILD CARDS."

  - CHANGE RATE TO SPC MAY INFLUENCE WILLINGNESS TO BUY UMS NOW.

  - BELL SYSTEM USP STATUS ESSENTIALLY UNKNOWN AT PRESENT. BELL IS ABOUT 80-85% OF ELIGIBLE LINES.

ENVIRONMENTAL FACTORS - (cont'd)

- OWNERSHIP OF TOLL SWITCHES AND BILLING PROCEDURES MAY INFLUENCE ATTRACTIVENESS OF AT LEAST ONE MAJOR UMS SALES APPEAL.

- POLITICAL BACKLASH FROM DIVESTITURE AND FCC - MANDATED CHANGES MAY SLOW TELCO ABILITY TO CONVERT, AN IRRATIONAL FACTOR.

SYSTEM BENEFITS (CLAIMS)

- FOUR PRIMARY CLAIMS ARE MADE FOR UMS. AUTOMATION RESULTS IN:

    1. LABOR SAVINGS.

    2. GREATER ACCURACY OF BILLING DATA.

    3. SPEED-UP OF BILLING PROCESS.

    4. ELIMINATION OF LOST BILLING TAPES.

- THE SUM OF THESE FOUR BENEFITS RESULTS IN A CLAIMED PAYBACK OF 18 MONTHS FOR THE SYSTEM. BILLING SPEED IS PRIMARY AND POSITIVELY IMPACT CASHFLOW.

- INCREASED REVENUES (OVER TIME) AND REDUCED REGULATORY LAG ARE INCREMENTAL BENEFITS.

- ADDITIONALLY UMS MAY BE USED IN TOLL POLLING WITH ADDITIONAL SAVINGS.

- IT MAY ALSO BE EMPLOYED FOR TOLL POLLING CURRENTLY AND BE DEPLOYED LATER FOR LOCAL SERVICE.

SYSTEM BENEFITS (CLAIMS) - (cont'd)

- TOLL POLLING HAS AN ENVIRONMENTAL "OVERHANG" IN THE QUESTION OF TOLL SWITCH OWNERSHIP (LDC VS. LEC) CURRENTLY UNDER FCC DECISION PROCESS.

KEY FUNCTIONAL CHARACTERISTIC

- THE PRIMARY ADVANTAGE OF UMS IS THAT IT ALLOWS COLLECTION OF DATA AT THE SWITCH. FROM THIS CHARACTERISTIC ALL OTHER BENEFITS AND CAPABILITIES FLOW.

- BY COLLECTING CUSTOMER DATA AT THE SWITCH IT IS POSSIBLE TO:

  - ELIMINATE TAPE DRIVES BY POLLING SWITCHES AND AGGREGATING CALL RECORDS ON-LINE TO A CENTRAL POINT.

  - AT THE CENTRAL POINT VERIFY, EDIT AND CONDENSE RAW BILLING DATA TO A SWITCH-INDEPENDENT SINGLE FORMAT.

  - ERROR CORRECT BILLING DATA THROUGH INTERNAL TABLES AND BY ON-LINE METHODS, RESULTING IN CLEANEST POSSIBLE DATA TO BILLING PROCESS.

KEY FUNCTIONAL CHARACTERISTIC - (cont'd)

- THROUGH THE USE OF RATING TABLES AND OTHER PRE-PROCESSING, REDUCE MAINFRAME BILLING LOADS.

- REDUCE COMMUNICATIONS LOADS THROUGH DATA AGGREGATION (AS COMPARED TO VOLUME OF RAW SWITCH DATA).

FUTURE ENHANCEMENTS

- UMS WILL BE FURTHER DEVELOPED IN THE FUTURE. PROVISIONS WILL BE MADE FOR:
  - EQUAL ACCESS REQUIRED CAPABILITIES TO TRACK ORIGINATING CARRIER AND TERMINATING USER DATA WILL BE ADDED.
  - DATA CURRENTLY HELD IN A "DROP FILE" WILL HAVE REPORTING AND ANALYSIS PROGRAMS DEVELOPED FOR SWITCH STATISTICS, TRAFFIC ANALYSIS AND CALL COMPLETION.
  - COMMUNICATIONS WILL BE PACKET-SWITCHED TO FURTHER REDUCE COMMUNICATION COSTS.

MAJOR ISSUES IDENTIFIED

- PRESENTLY THE ABILITY TO TALK TO SPC SWITCHES IS LIMITED TO A FEW TYPES, THE INTERFACES FOR WHICH ARE EXPECTED TO BE AVAILABLE Q1/84 THRU Q1/85. WHAT SPC SWITCHES WILL BE IN MOST DEMAND BY THE MARKET AND ARE NOT COVERED?

- EM SWITCHES ACCOUNT FOR ABOUT 50% OF INSTALLED BASE. DOES THE REQUIREMENT FOR A PROCTOR-SUPPLIED INTERFACE CREATE A "BRAND-NAME" PROBLEM?

- PRESENTLY UMS CAN "TALK" TO IBM MAINFRAMES. IS THERE A MATERIAL REQUIREMENT FOR COMM. TO OTHER MAINFRAMES? OTHERS COULD BE AS MUCH AS 25% OF THE MARKET.

- IS UMS TOO "COMPLETE" A SOLUTION AND WOULD TELCOS PREFER SOMETHING SIMPLER AND CHEAPER?

- WHAT IS THE TIMING REQUIRED FOR SUCCESSFUL MARKETING OF THE SOFTWARE?

MAJOR ISSUES IDENTIFIED - (cont'd)

- SEVEN TELCO FUNCTIONS HAVE BEEN IDENTIFIED AS HAVING AN INFLUENCE ON UMS ADOPTION. OF THESE:
  - WHICH ARE MOST POWERFUL?
  - WHICH ARE LIKELY TO BE POSITIVE?
  - WHICH ARE LIKELY TO BE NEGATIVE?
  - WHO SHOULD SPONSOR BE?
  - WHAT GENERAL PLAN WILL BE MOST SUCCESSFUL?
- THE INVOLVEMENT OF MULTIPLE FUNCTIONS SUGGEST A COMPLEX, LONG LEAD SALES SITUATION WHICH SUGGESTS HIGH SALES EXPENSES. HOW WILL THIS INFLUENCE PRICE OF UMS?

MAJOR ISSUES IDENTIFIED - (cont'd)

- THERE ARE SEVERAL MODES IN WHICH UMS MAY BE SOLD:
  - SOFTWARE ONLY
  - TURNKEY WITH MINI
  - TURNKEY WITH MINI AND SWITCH INTERFACE
  - SERVICE WITH OUTPUT TO BILLING SYSTEM
  - SERVICE INCLUDING PRODUCTION OF BILLS.
- WHAT INDIVIDUAL MODE PROVIDES THE LARGEST MARKET AND HIGHEST MARGIN? WHAT GROUP (IF ANY) OF MODES PROVIDES THE LARGEST MARKET AND MAXIMIZES PROFIT?
- WHAT GTEDS SOFTWARE AND SERVICES CONSTITUTE RELATED OFFERINGS TO THE SAME INFLUENTIALS? WHAT IS AN OPTIMUM PORTFOLIO WITH RESPECT TO MARKET AND COMPETITION?